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PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 19 June 2001 (19.06.01)	
International application No. PCT/IB00/01384	Applicant's or agent's file reference F15389 GV
International filing date (day/month/year) 28 September 2000 (28.09.00)	Priority date (day/month/year) 28 September 1999 (28.09.99)
Applicant HALL, Kenneth, Michael	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 09 April 2001 (09.04.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Zakaria EL KHODARY Telephone No.: (41-22) 338.83.38
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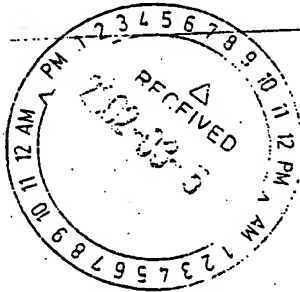
PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

LE ROUX, Marius
D.M. KISCH INC.
PO Box 781218
Sandton 2146
AFRIQUE DU SUD



NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year)

25.02.2002

Applicant's or agent's file reference
P21411PC00

IMPORTANT NOTIFICATION

International application No.
PCT/IB00/01384

International filing date (day/month/year)
28/09/2000

Priority date (day/month/year)
28/09/1999

Applicant
COBB INTERNATIONAL LIMITED et al.

Corrected version

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P21411PC00	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/IB00/01384	International filing date (day/month/year) 28/09/2000	Priority date (day/month/year) 28/09/1999
International Patent Classification (IPC) or national classification and IPC A47J37/07		
Applicant COBB INTERNATIONAL LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 09/04/2001	Date of completion of this report 25.02.2002
Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div>	Authorized officer Novelli, B Telephone No. +49 89 2399 2864



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IB00/01384

I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-10 as originally filed

Claims, No.:

1-4 as received on 14/01/2001 with letter of 14/01/2001

Drawings, sheets:

1/7-7/7 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IB00/01384

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-4
	No: Claims
Inventive step (IS)	Yes: Claims 1-4
	No: Claims
Industrial applicability (IA)	Yes: Claims 1-4
	No: Claims

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB00/01384

1) The nearest state of the art is represented by document **US-A-5406930**. None of the available prior art documents discloses or suggests an annular trough surrounding a dish for combustible material as recited in independent claim 1.

2) The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT.

3) Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in document **US-A-5406930** is not mentioned in the description, nor is this document identified therein.

12

AMENDED CLAIMS

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1. Cooking apparatus including a base (14) and a combustion chamber (18) which includes a dish (28) for combustible material concentrically arranged within the combustion chamber (18) and having side walls (40) which are inwardly spaced from the inner side walls (26) of the combustion chamber so that an annular trough is defined between the side walls (40) of the dish (28) and inner side walls (26) of the combustion chamber (18)

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2. Cooking apparatus as claimed in Claim 1, in which the base (14) includes an upper section (24) and a lower section (48) with an air inlet (58) defined between the sections (24) (48) to allow air flow into the combustion chamber (18), the upper section (24) and lower section 48 being spaced from one another to form a air reservoir (36) between the sections.

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3. Cooking apparatus according to claim 1 including a closure member (12) arranged to be seated on the base (14), the closure member (12) at least partially defining a cooking chamber (20) heated by the combustible material and including an inner reflective surface (60) which enhances reflection of heat.

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4. Cooking apparatus as claimed in Claim 2 in which the base (14) includes insulating material (34) (50) within the interior of both the upper section (24) and lower section (48) to insulate the sections (24) (48) against heat radiating from the combustible material in the dish (28).

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PATENT COOPERATION TREATY
PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

REC'D 07 FEB 2002

WIPO PCT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P21411PC00	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/IB00/01384	International filing date (<i>day/month/year</i>) 28/09/2000	Priority date (<i>day/month/year</i>) 28/09/1999
International Patent Classification (IPC) or national classification and IPC A47J37/07		
Applicant COBB INTERNATIONAL LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☐ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 09/04/2001	Date of completion of this report 05.02.2002
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Novelli, B Telephone No. +49 89 2399 2864 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IB00/01384

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-10 as originally filed

Claims, No.:

1-21 as originally filed

Drawings, sheets:

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IB00/01384

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☒ the entire international application.

☐ claims Nos. .

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IB00/01384

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

- 1.1) The plurality of independent claims (1, 3, 4) in the same category, with different - though overlapping - scope, makes it practically impossible to determine the matter for which protection is sought and places an undue burden on others seeking to establish the extent of the protection (Art. 6 PCT, first sentence). Moreover, it is impossible to establish what features are essential to the invention. Therefore the claims as a whole are not clear, contrary to Art. 6 PCT, second sentence.
- 1.2) In view of the above objection it is not practicable to carry out a full examination of the application.
- 2) Claim 21 contains reference to the description and the drawings. According to Rule 6.2(a) PCT, claims should not contain such reference except where absolutely necessary, which is not the case here.
- 3) The numbering of claims 18-21 is incorrect.
- 4) The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
- 5) To meet the requirements of 5.1(a)(ii) PCT, the most relevant document of the prior art should have been identified in the description and the relevant background art disclosed therein should have been briefly discussed.

INTERNATIONAL SEARCH REPORT

International Publication No

PCT/IB 00/01384

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A47J37/07

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A47J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 00 02474 A (CONSTABLE DANNY L ;ATD CORP (US); RAGLAND SCOTT W (US); REMKE MATT) 20 January 2000 (2000-01-20) the whole document	1-4, 21
X	US 5 588 420 A (DICKSON CURTIS M) 31 December 1996 (1996-12-31) the whole document	1-3, 21
X	US 5 406 930 A (RAGLAND G WILLIAM ET AL) 18 April 1995 (1995-04-18) the whole document	1-3, 21
A		4-20
X	US 5 197 379 A (LEONARD JR GUSTAV) 30 March 1993 (1993-03-30) the whole document	1-3

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *8* document member of the same patent family

Date of the actual completion of the international search

3 January 2001

Date of mailing of the international search report

12/01/2001

Name and mailing address of the ISA

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Claudel, B

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Publication No

PCT/IB 00/01384

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0002474 A	20-01-2000	AU 4983799 A	01-02-2000
US 5588420 A	31-12-1996	NONE	
US 5406930 A	18-04-1995	AT 162885 T	15-02-1998
		AU 678595 B	05-06-1997
		AU 7522994 A	28-02-1995
		BR 9407235 A	24-09-1996
		CA 2169265 A	16-02-1995
		DE 69408327 D	05-03-1998
		DE 69408327 T	10-09-1998
		EP 0712478 A	22-05-1996
		ES 2115252 T	16-06-1998
		WO 9504901 A	16-02-1995
US 5197379 A	30-03-1993	NONE	

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 April 2001 (05.04.2001)

PCT

(10) International Publication Number
WO 01/22854 A1

(51) International Patent Classification: A47J 37/07

(74) Agent: VIVIER, Garth; Adams & Adams, P.O. Box 1014,
1140 Prospect Street, Hatfield, 0001 Pretoria (ZA).

(21) International Application Number: PCT/IB00/01384

(22) International Filing Date:
28 September 2000 (28.09.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
99/6164 28 September 1999 (28.09.1999) ZA
99/7827 22 December 1999 (22.12.1999) ZA

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(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

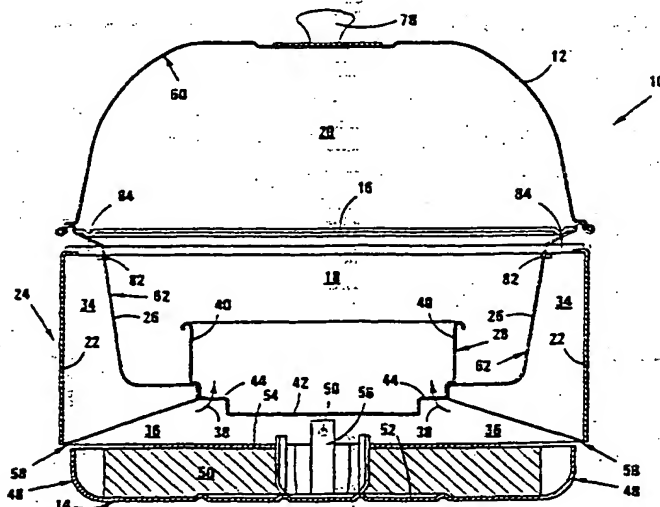
With international search report.

(72) Inventor; and

(75) Inventor/Applicant (for US only): HALL, Kenneth,
Michael [ZA/ZA]; 97 Jan Smuts Avenue, Saxonwold,
2196 Johannesburg (ZA).

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: COOKING APPARATUS



(57) Abstract: Cooking apparatus (10) is provided which includes a base (14) and a closure member (12). The base includes insulating material (34) which at least partially defines a combustion chamber (18) for holding a combustable material for providing heat in use. The closure member (12) is arranged to be seated on the base (14) and at least partially defines a cooking chamber (20) heated by the combustable material. The base typically includes an upper section (24) and a lower section (48) with an air inlet (58) defined between the sections to allow air flow into the combustion chamber (18). The apparatus (10) includes a body portion which includes an elongate air inlet (58) for feeding air to the combustion chamber in use, the inlet being defined between the upper (24) and lower (48) sections.

WO 01/22854 A1

7/ptd

1

COOKING APPARATUS

THIS INVENTION relates to cooking apparatus. It also relates to a base for cooking apparatus.

Various different types of outdoor cooking apparatus including a base and a dome are well known. The base and the dome define a hemispherical body including a cooking chamber in which a combustible material, e.g. charcoal briquettes or the like, provide heat to cook food in a barbecue fashion. A typical example of such apparatus is a WeberTM kettle barbecue which has a metal base and dome. In use, the metal of the dome and base heats up resulting in reduced efficiency and hindering portability of the apparatus in use. For the purposes of this specification apparatus in the form of a so-called "kettle barbecue" should be predominantly, but not exclusively, borne in mind.

According to the invention, there is provided cooking apparatus which includes

15 a base including insulating material which at least partially defines a combustion chamber for holding a combustible material for providing heat in use; and

a closure member arranged to be seated on the base, the closure member at least partially defining a cooking chamber heated by the
20 combustible material.

Typically, the base includes an upper section and a lower section with an air inlet defined between the sections to allow air flow into the combustion chamber.

Further in accordance with the invention, there is provided cooking apparatus which includes a body portion including

a base including an upper section and a lower section, the upper section defining a combustion chamber for holding a combustible material for providing heat in use, and the lower section being attached to the upper section;

an elongate air inlet for feeding air to the combustion chamber in use, the inlet being defined between the upper and lower sections; and

a closure member arranged to be seated on the base, the closure member at least partially defining a cooking chamber heated by the combustible material.

Still further in accordance with the invention, there is provided cooking apparatus which includes a body portion including

a base which defines a combustion chamber for holding a combustible material for providing heat in use; and

a closure member arranged to be seated on the base, the closure member at least partially defining a cooking chamber heated by the combustible material and including an inner surface which enhances reflection of heat.

The reflective surface is typically defined by a natural inner metal surface of the closure member and, accordingly, the inner surface

of the closure member is preferably not painted or provided with a finish which reduces reflection of heat.

The base typically includes insulating material which at least partially defines the combustion chamber for holding the combustible material to provide heat in use. The combustion chamber may include holding means for holding the combustible material. Typically, the holding means is in the form of a metal dish which is seated in a bottom opening of the insulating material. The dish may be circular in outline and include a lower circular ring section in which a plurality of apertures are defined. In use, the air from the air inlet passes through the apertures to allow combustion of the combustible material.

The base typically includes a frame within which the insulating material is mounted and which forms part of the upper section. Preferably, the frame is a hollow circular cylindrical frame and, accordingly, the lower section may be circular in lateral section and attached to an operatively lower end of the frame. The air inlet port may thus be circular in outline.

The lower section may be shaped and dimensioned so as at least partially to define an air reservoir below the combustion chamber. Typically, the lower section of the base includes a lower frame, e.g. a pressed metal frame, and insulating material for insulating the lower section from heat radiating from the holding means. The air reservoir may be defined between the insulating material in the lower and upper sections and the holding means. In a preferred embodiment, the lower section includes a glass fibre mat provided on an upper surface of the

insulating material in the lower section. Accordingly, the combustion chamber may be a generally insulated chamber with an open upper end from which heat radiates into the cooking chamber.

5 The upper section of the base may include a heat reflective insert which defines a seat in which the holding means is seated and which also defines a wall of the combustion chamber. The insulating material may be shaped and dimensioned to receive the reflective insert and insulate the reflective insert from the frame. The reflective insert is typically pressed and its upper rim defines a seat for the closure member.
10 The closure member is typically in the form of a dome, e.g. a pressed anodised aluminium dome which is about 1 mm thick, and which includes a plurality of ventilation apertures and a handle. In certain embodiments, the dome is metallic powder coated on its exterior.

15 The insulating material is typically glass fibre wool, ceramic wool, a perlite ceramic mix, a vermiculite cement mix, or the like.

20 The cooking apparatus may include a metal grille or grid which is located in use between the combustion chamber and the cooking chamber. Typically, the grille is in the form of a stainless steel disc which is circular in outline and includes a substantial number of apertures or bores. The grille is dimensioned so that it may be seated on the reflective insert and the bores are arranged in rings or groups at increasing radii. In certain embodiments, a plurality of grooves, typically three grooves arranged in a star, are provided. Advantageously, the bores have a diameter of about 5 mm thereby to inhibit any flame arising
25 in the combustion chamber from entering the cooking chamber.

The invention extends to a base for cooking apparatus as hereinbefore described.

The invention is now described, by way of example, with reference to the accompanying diagrammatic drawings.

5 In the drawings,

Figure 1 shows a cross-sectional view of cooking apparatus in accordance with the invention;

Figure 2 shows a cross-sectional view of components of a base of the apparatus of Figure 1;

10 Figure 3 shows a cross-sectional view of a closure member of the apparatus of Figure 1;

Figure 4 shows a top plan view of holding means for holding a combustible material in a combustion chamber of the apparatus;

15 Figure 5 shows a cross-sectional view of the holding means taken at V-V in Figure 4;

Figure 6 shows a top plan view of a grille or platform of the apparatus of Figure 1;

Figure 7 shows a cross-sectional view of the grille taken at VII-VII in Figure 6 with certain detail omitted for the sake of clarity;

20 Figure 8 shows a three-dimensional view from the top of a frame of the base of the apparatus; and

Figure 9 shows a three-dimensional view from the bottom of the frame of Figure 8.

25 Referring to the drawings, reference numeral 10 generally indicates cooking apparatus in accordance with the invention. The

apparatus 10 is in the form of a so-called "kettle barbecue" and is typically used in an outdoor environment to cook food. The apparatus 10 includes a dome-shaped closure member or lid 12, a base 14, and a grille 16 which separates a combustion chamber 18 and a cooking chamber 20. As described in more detail below, a combustible material, typically charcoal briquettes or the like, is located in the base 14 to provide heat which rises into the cooking chamber 20 thereby to cook food located on the grille 16.

The base 14 includes an outer sleeve or frame 22 (see Figures 1, 7 and 8), which is typically of an ABS plastics material of about 2.5 mm in thickness. The frame 22 is hollow circular cylindrical and forms part of an upper section 24 of the base 14. It is however to be appreciated that the base may be of any shape. The base 14 further includes a heat reflective insert 26 (see Figures 1 and 2) which is generally cylindrical in outline with a tapering diameter and provides a seat in which holding means in the form of a dish 28 (see Figures 1, 2, 4 and 5) is seated. The dish 28 is typically of stainless steel with a diameter 30 (see Figure 2) of about 170 mm and a depth 32 of about 35 mm.

In order to enhance heat retention within the combustion chamber 18 and inhibit heating of the frame 22, insulating material 34 is provided. The insulating material 34 is typically glass fibre wool, ceramic wool, a perlite cement mix, vermiculite cement mix, or the like and, in top plan view, is generally cylindrical in shape and defines a seat for the insert 26. The insulating material 34 is shaped and dimensioned so as to define an air reservoir 36 from which air may be drawn into the

combustion chamber 18 as generally indicated by arrows 38. Accordingly, the dish 28 includes side walls 40 integrally formed with a bottom or base 42 via a circular ring 44 (see Figure 4) with circumferentially spaced bores or apertures 46 (only a few of which are referenced in the drawings for clarity) to allow air flow as indicated by arrows 38.

The base 14 further includes a lower section 48 which is typically pressed from aluminium and of a slightly lesser diameter than the upper section 24. The lower section 48 includes a circular disc 50 of insulating material to insulate its lower frame 52 from heat radiated from the dish 28. Further, the lower section 48 includes a glass fibre film 54 to enhance the insulation. In other embodiments, the base 14 is of ABS plastics material.

The lower section 48 includes three equally angularly spaced mounting brackets 56 (only one of which is shown in Figure 1) for mounting the lower section 48 to the upper section 24. The lower section 48 is mounted to the upper section 24 in such a fashion so as to define an air inlet 58 which allows air to be drawn into the combustion chamber 18 via the air reservoir 36 and through the bores 46. The air inlet 58 is in the form of a ring which extends about the upper and lower sections 24, 48 to allow a more uniform intake of air. As the air inlet 58 is elongate in nature and extends in the form of a ring it is believed that the effect of ambient wind on combustion in the combustion chamber 18 is at least partially reduced. Each mounting bracket 56 is pop-riveted (not shown) to the frame 22 through apertures 58 (see Figures 1, 8 and 9).

The closure member or lid 12 is pressed from aluminium and has a natural internal reflective surface 60 (see Figures 1 and 3) which enhances the reflection of heat towards food located on the grille 16. Accordingly, the internal reflective surface 60 is not painted black or a dark colour which retards reflection. However, in certain embodiments, the lid 12 may include a coating which enhances reflection. Likewise, the insert 26 has a reflective surface 62 to enhance the reflection of heat towards the grille 16 and thus towards the cooking chamber 20.

Referring in particular to Figures 6 and 7 of the drawings, the grille 16 is disclike in shape and of stainless steel which is about 1 to about 1.5 mm thick. In a further embodiment, the grille 16 has three pressed feet which are spaced circumferentially equidistant. In use, the feet are seated on the insert 26. It is believed that in the event of the grille 16 buckling or warping due to heat, the grille 16 may rest in a stable fashion on the insert 26 by means of the feet.

The grille 16 has a diameter 64 of about 290 mm and a circumferential groove 66 with a diameter 68 of about 275 mm. Further, the grille 16 has a solid central portion 70 about which a substantial number of holes or bores 72 are formed. The bores 72 are arranged in an equally spaced fashion on circles of increasing radii. The bores 72 have a diameter of about 5 mm so that any flame occurring in the combustion chamber 18 is inhibited from entering the cooking chamber 20. A circle of bores 74 having a larger diameter is provided about a periphery of the grille 16. The grille 16 has recesses or grooves 76 which extend outwardly from the central portion 70 in a starlike fashion. In use, the bores 74 provide increased ventilation between the

combustion chamber 18 and the cooking chamber 20 and the grooves 76 enhance the rigidity of the grille 16.

The closure member or lid 12 includes a handle 78 to facilitate removal thereof from the base 14. The lid 12 is typically anodized aluminium of about 1 mm in thickness and three ventilation holes (not shown) are provided about the handle 78. In other embodiments, the exterior of the lid 12 is metallic powder coated. The ventilation holes are typically about 15 mm in diameter and the handle 78 is typically of a suitable plastics material capable of withstanding high temperatures. As mentioned above, the lid 12 has an internal reflective surface 60 to reflect heat towards the grille 16. A lower peripheral edge 80 includes an upturned lip to facilitate seating of the lid 12 on the reflective insert 26 (see Figure 1).

In order to retain the insert 26 in its seated position within the insulating material 34, pop-rivets 82 are provided (see Figure 1). In particular, the base 14 includes a plastics ring 84 which is siliconed to the frame 22 and checks removal of the insert 26 as a result of the pop-rivets 82. In other embodiments, the pop-rivets 82 are omitted and the insert is retained in its seated position by means of a high temperature silicone adhesive.

It is believed that the invention, as illustrated, provides an enhanced cooking apparatus 10 for barbecuing. In particular, the insulating material 34 reduces the amount of heat lost from the combustion chamber 18 to the frame 22 thereby increasing the quantum of heat fed through to the cooking chamber 20. Further, as the frame

22 in insulated from the combustion chamber 18, it remains relatively cool during the cooking operation and, accordingly, the cooking apparatus 10 may be lifted or transported by user with relative ease.

It is further believed that the grille 16 which separates the cooking chamber 20 from the combustion chamber 18 enhances the operating characteristics of the apparatus 10. In particular, the bores 72 inhibit any flames which may be generated in the combustion chamber 18 from entering the cooking chamber 20 and, accordingly, the likelihood of the food being burnt by the flames is therefore reduced. Further, as the inlet 58 extends about the periphery of the base 14, it is believed that the flow of air into the cooking chamber 18 is less sensitive to ambient wind than in the case where a few large apertures in the base are provided as in conventional barbecue cooking apparatus. In addition, the internal reflective surface 60 of the lid 12 enhances cooking as heat is reflected towards food placed on the grille 16.

CLAIMS:

1. Cooking apparatus which includes a base including insulating material which at least partially defines a combustion chamber for holding a combustible material for providing heat in use; and
5. a closure member arranged to be seated on the base, the closure member at least partially defining a cooking chamber heated by the combustible material.
2. Cooking apparatus as claimed in Claim 1, in which the base includes an upper section and a lower section with an air inlet defined between the sections to allow air flow into the combustion chamber.
3. Cooking apparatus which includes a body portion including a base including an upper section and a lower section, the upper section defining a combustion chamber for holding a combustible material for providing heat in use, and the lower section being attached to the upper section;
15 an elongate air inlet for feeding air to the combustion chamber in use, the inlet being defined between the upper and lower sections; and
a closure member arranged to be seated on the base, the closure member at least partially defining a cooking chamber heated by the
20 combustible material.
4. Cooking apparatus which includes a body portion including a base which defines a combustion chamber for holding a combustible material for providing heat in use; and
a closure member arranged to be seated on the base, the closure
25 member at least partially defining a cooking chamber heated by the

NB combustible material and including an inner reflective surface which enhances reflection of heat.

5 5. Cooking apparatus as claimed in Claim 4, in which the reflective surface is defined by a natural inner metal surface of the closure member.

6. Cooking apparatus as claimed in Claim 5, in which the base includes insulating material which at least partially defines the combustion chamber for holding the combustible material.

NB 10 7. Cooking apparatus as claimed in Claim 6, in which the combustion chamber includes holding means for holding the combustible material.

8. Cooking apparatus as claimed in Claim 7, in which the holding means is in the form of a metal dish which is seated in a bottom opening of the insulating material.

15 9. Cooking apparatus as claimed in Claim 8, in which the dish is circular in outline and includes a lower circular ring section in which a plurality of apertures are defined.

20 10. Cooking apparatus as claimed in Claim 9, in which the base includes a frame within which insulating material is mounted and which forms part of an upper section.

11. Cooking apparatus as claimed in Claim 10, in which the frame is a hollow circular cylindrical frame and the lower section is

circular in lateral section and attached to an operatively lower end of the frame.

12. Cooking apparatus as claimed in Claim 11, in which the lower section is shaped and dimensioned so as at least partially to define an air reservoir below the combustion chamber.

13. Cooking apparatus as claimed in Claim 12, in which the lower section of the base includes a lower frame and insulating material for insulating the lower section from heat radiating from the holding means.

14. Cooking apparatus as claimed in Claim 13, in which an air reservoir is defined between the insulating material in the lower and upper sections and the holding means.

15. Cooking apparatus as claimed in Claim 14, in which the lower section includes a glass fibre mat provided on an upper surface of the insulating material in the lower section.

16. Cooking apparatus as claimed in Claim 15, in which the upper section of the base includes a heat reflective insert which defines a seat in which the holding means is seated and which also defines a wall of the combustion chamber.

17. Cooking apparatus as claimed in Claim 16, in which the insulating material is shaped and dimensioned to receive the reflective insert and insulate the reflective insert from the frame. 1. Cooking apparatus as claimed in Claim 17, in which the closure member is in the

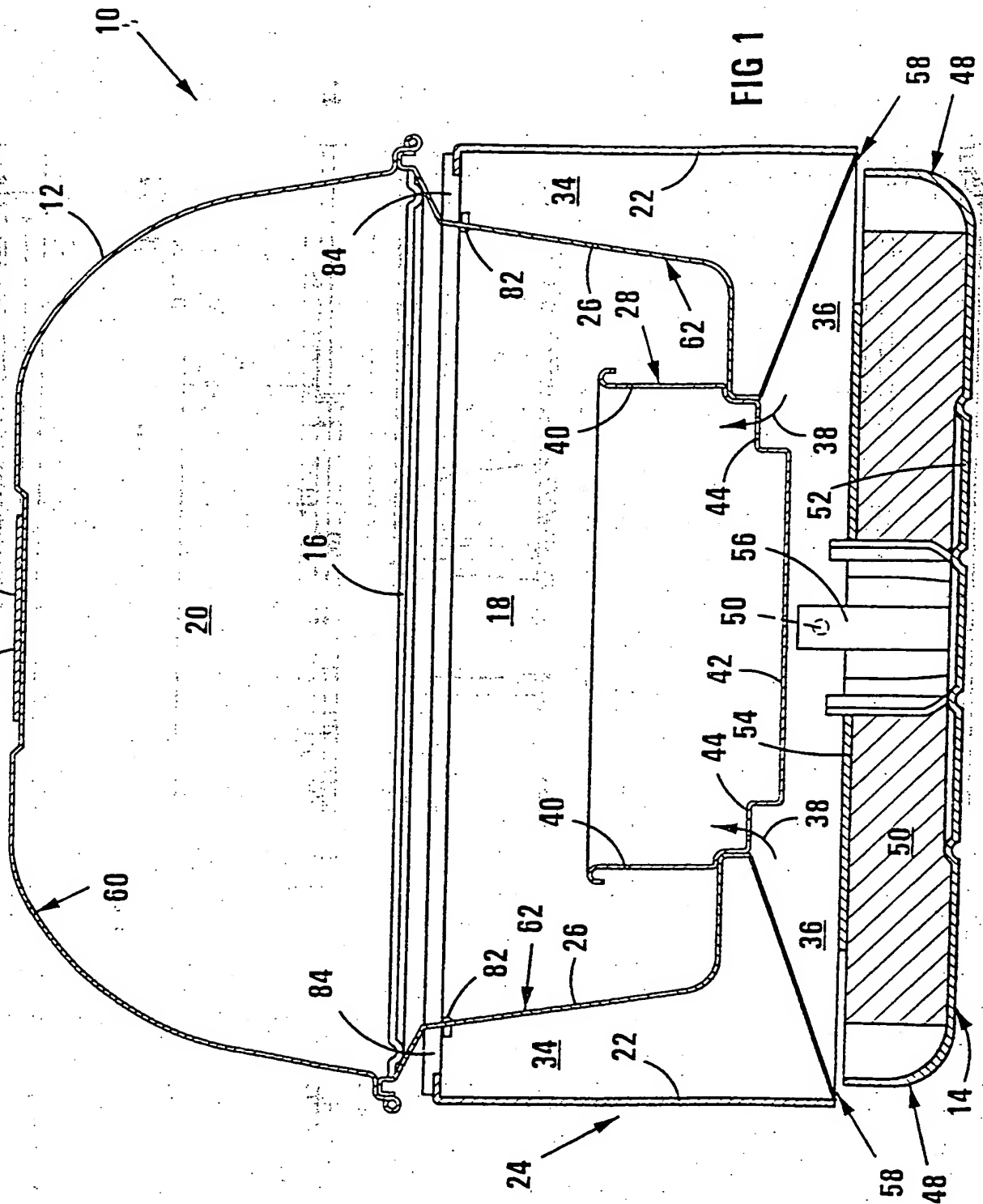
form of a dome and includes a plurality of ventilation apertures and a handle.

18. Cooking apparatus as claimed in Claim 18, which includes
a metal grille or grid which is located in use between the combustion
5 chamber and the cooking chamber.

19. Cooking apparatus as claimed in Claim 19, in which the
grille is in the form of a stainless steel disc which is circular in outline
and includes a substantial number of apertures or bores.

20. Cooking apparatus as claimed in Claim 20, in which the
10 grille is dimensioned so that it may be seated on the reflective insert and
the bores are arranged in rings or groups at increasing radii.

21. A new cooking apparatus substantially as herein described
and illustrated.



2/7

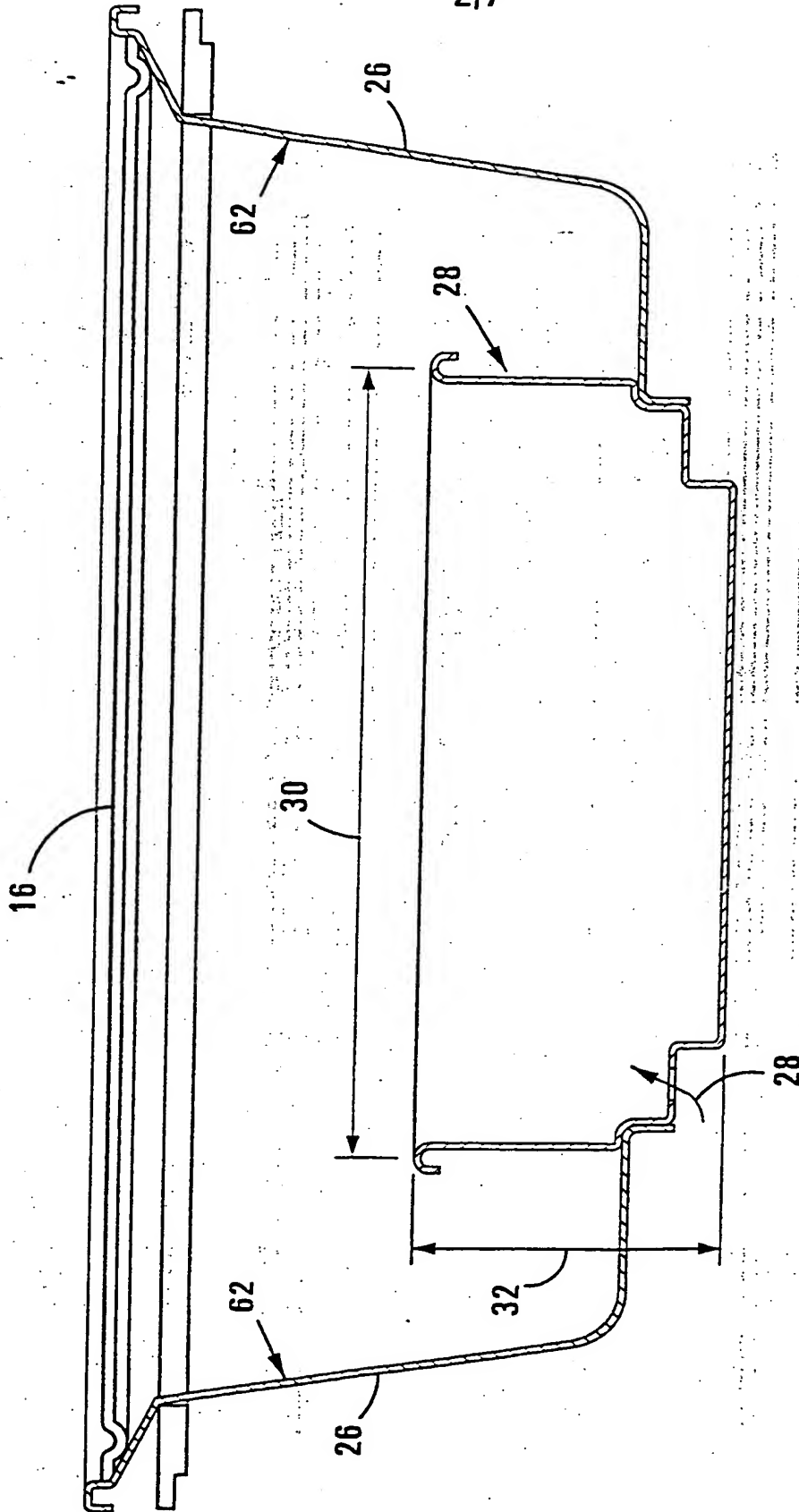


FIG 2

3/7

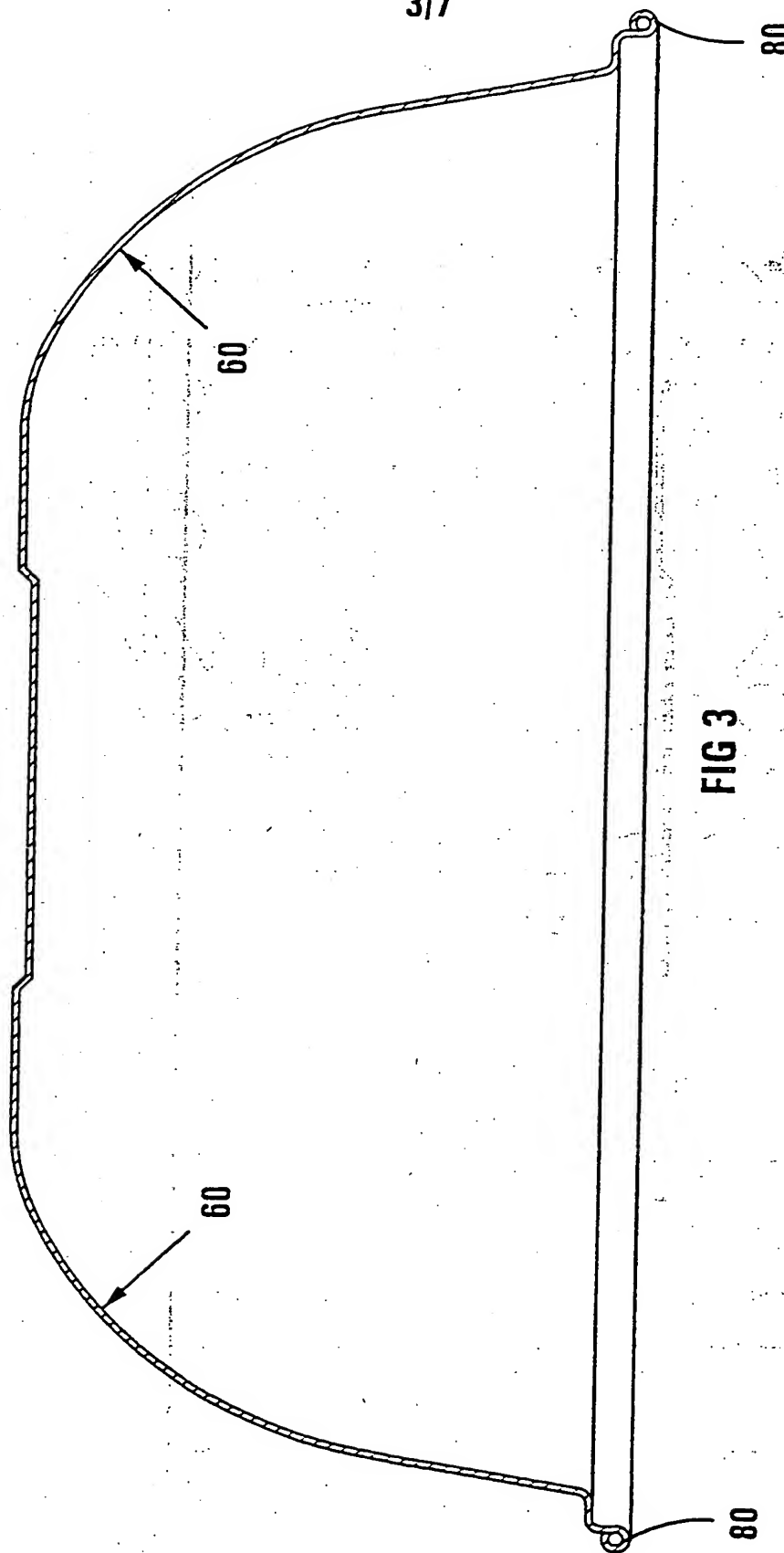


FIG 3

4/7

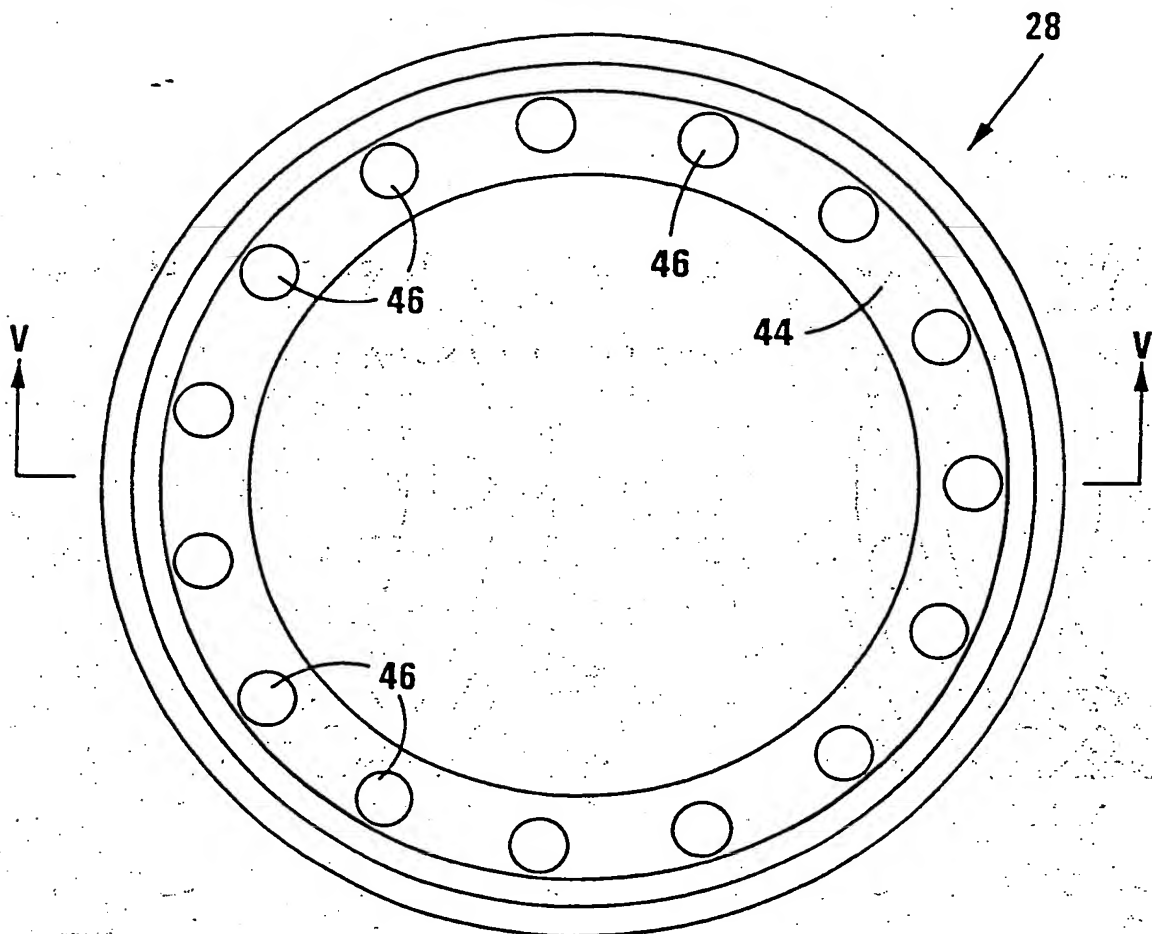


FIG 4

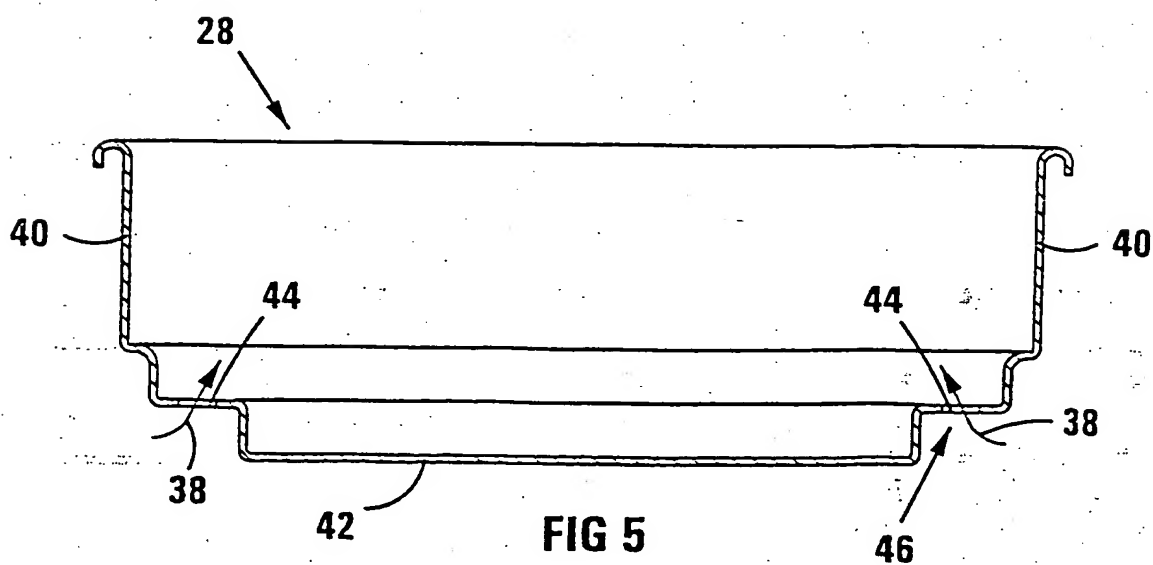


FIG 5

5/7

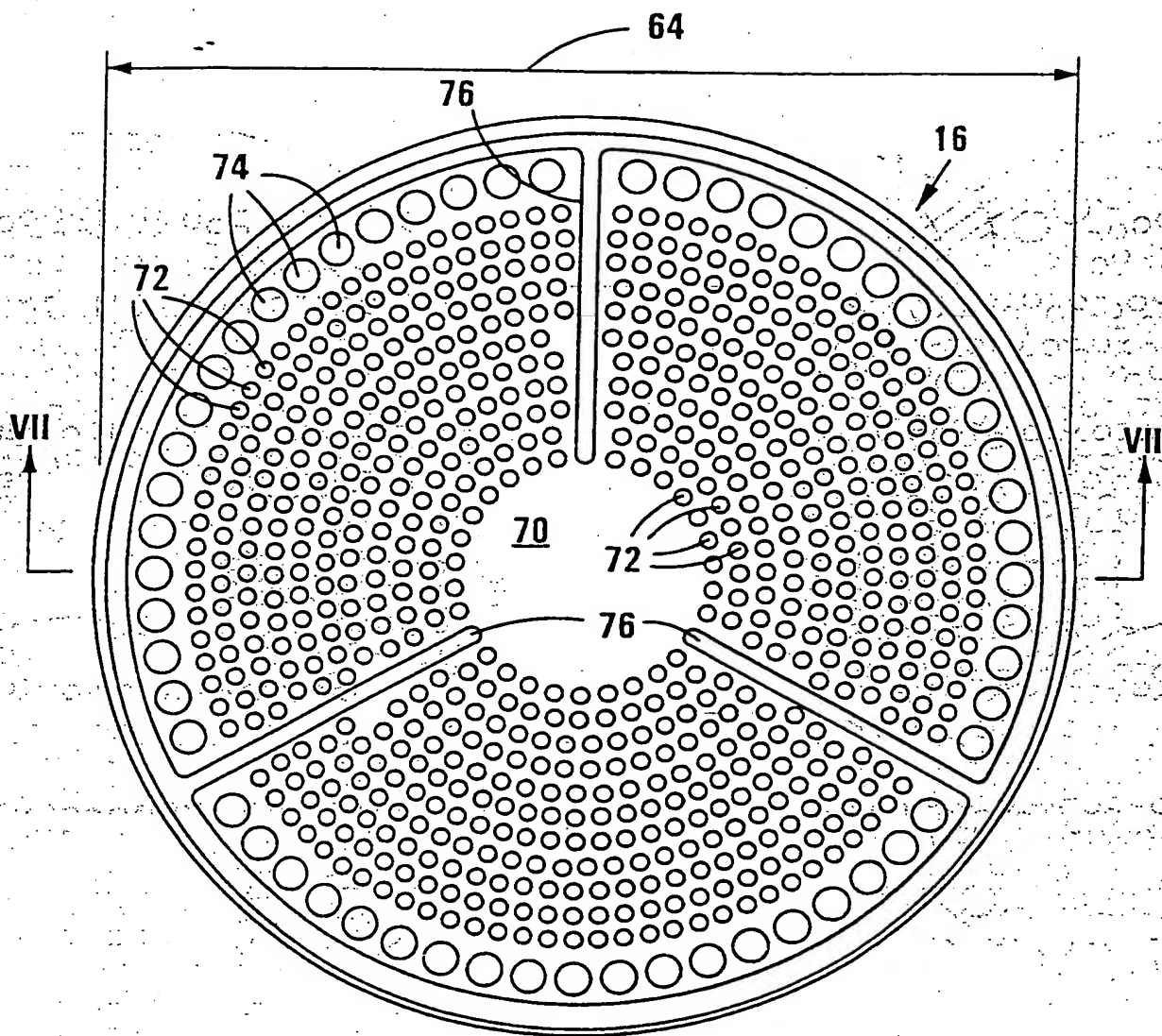


FIG 6

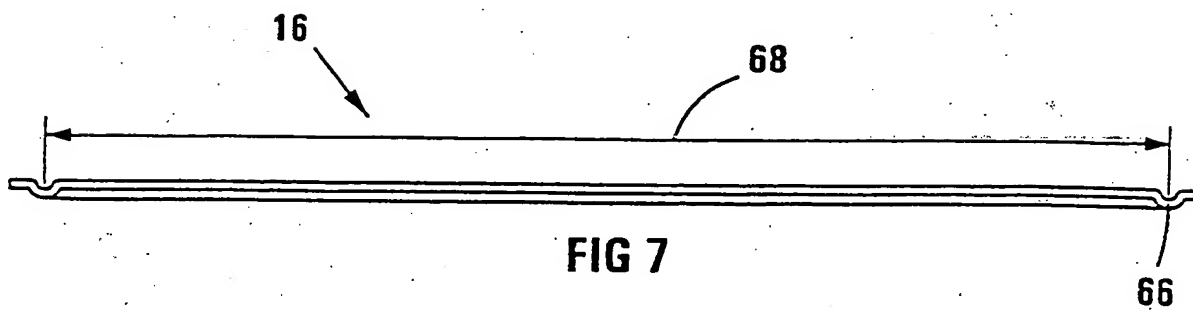


FIG 7

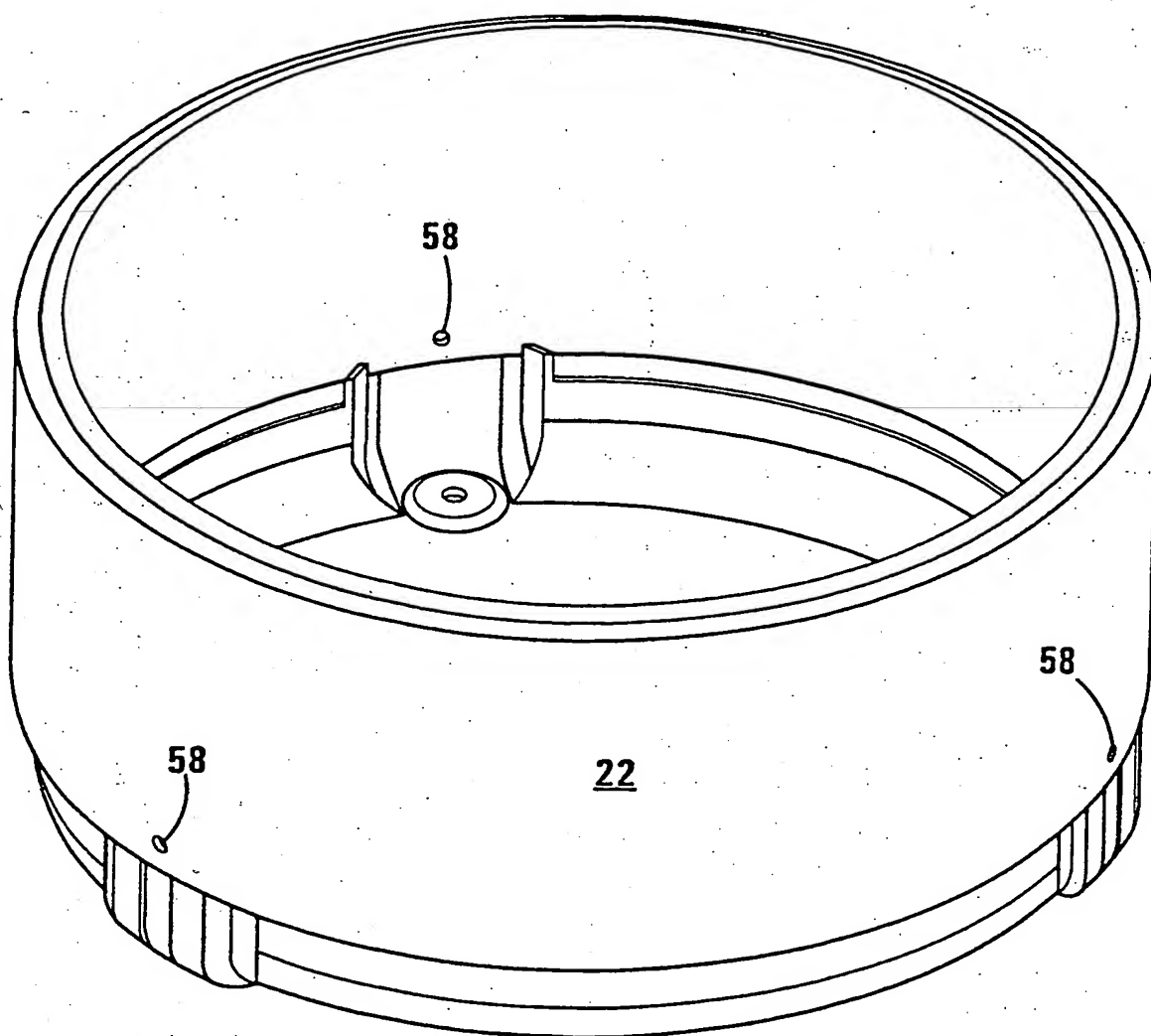


FIG 8

7/7

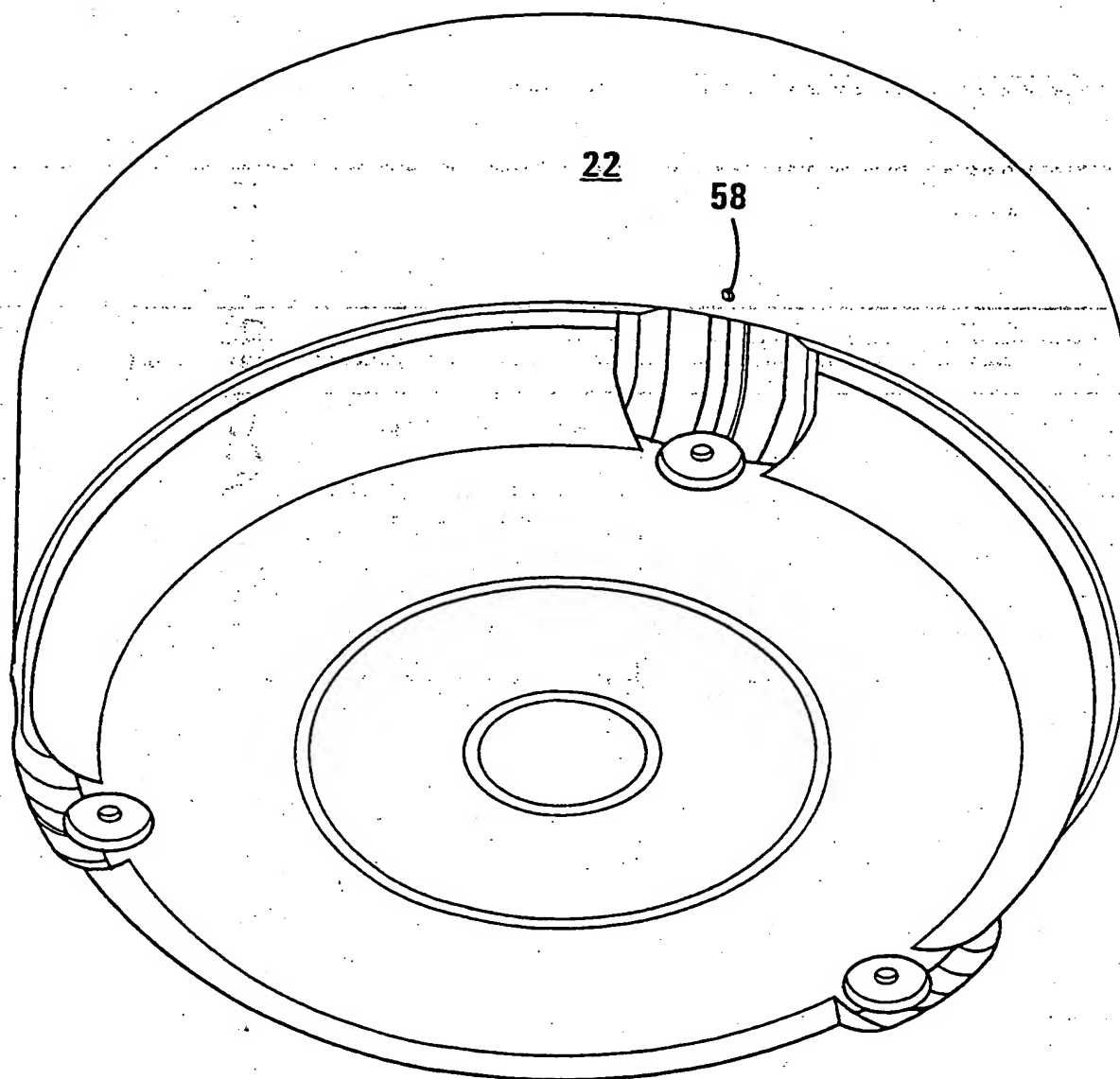


FIG 9

INTERNATIONAL SEARCH REPORT

Interr Application No
PCT/IS 00/01384

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A47J37/07

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A47J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 00 02474 A (CONSTABLE DANNY L ;ATD CORP (US); RAGLAND SCOTT W (US); REMKE MATT) 20 January 2000. (2000-01-20) the whole document	1-4, 21
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A		4-20
X	US 5 197 379 A (LEONARD JR GUSTAV) 30 March 1993 (1993-03-30) the whole document	1-3

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

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- *Z* document member of the same patent family

Date of the actual completion of the international search

3 January 2001

Date of mailing of the international search report

12/01/2001

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/JP 00/01384

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